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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/607,760

06/27/2003

Marc Andre Boillot

CE10967JI016

7406

34952 7590 02/13/2007  
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EXAMINER

WOZNIAK, JAMES S

ART UNIT

PAPER NUMBER

2626

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

02/13/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/607,760

Applicant(s)

BOILLOT ET AL

Examiner

James S. Wozniak

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Claim Objections*

1. **Claims 17-22** are objected to because of the following informalities:

In claim 17, lines 6-7, "based up a selectactable" should be changed to --based upon a selectable--.

Dependent claims 18-22 fail to overcome the objection directed towards independent claim 17, and thus, are also objected to due to minor informalities.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 101*

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. **Claims 17-22** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

**Claims 17-22** are drawn to a "program" data structure (*program storage on a wireless interface, Specification, Page 8*), not limited to a tangible computer readable medium, and as such is non-statutory subject matter. See MPEP § 2106.IV.B.1.a. Data structures not claimed as embodied in computer readable media are descriptive material *per se* and are not statutory because they are not capable of causing functional change in the computer. See, e.g., *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure *per se* held

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nonstatutory). Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention, which permit the data structure's functionality to be realized. In contrast, a claimed computer readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory. Similarly, computer programs claimed as computer listings *per se*, i.e., the descriptions or expressions of the programs are not physical "things." They are neither computer components nor statutory processes, as they are not "acts" being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer, which permit the computer program's functionality to be realized. In order to overcome the present rejection, the examiner suggests a claim amendment directed towards indicating that the claimed computer program is stored on a tangible computer readable medium.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. **Claims 1-4, 6-7, 17-20, and 22** are rejected under 35 U.S.C. 102(b) as being anticipated by Rayskiy (*U.S. Patent: 6,278,387*).

With respect to **Claim 1**, Rayskiy discloses:

An audio input module for receiving audio from a user (*voice input via a microphone, Col. 2, Lines 60-67; and Fig. 1, Element 125*);

An audio output module for rendering audio to the user (*speaker for outputting voice signals, Col. 3, Lines 11-29; and Fig. 1, Element 121*);

An audio loopback path to present audio from the audio input module to the audio output module so as to be heard by the user (first voice signal input into a microphone and processed, Col. 2, Lines 60-67; and Fig. 1 Elements 117 and 125; and second voice signal, corresponding to the input or first audio signal, fed back through a speaker, Col. 1, Lines 42-51; Col. 3, Lines 11-29; and Fig. 1, Elements 119 and 121); and

Wherein the audio loopback path presents audio at a loopback rate depending upon a selectable rate variable (*user setting of an audio rate based on a rate adjustment, Col. 3, Lines 11-29; and Fig. 1, Element 113*).

With respect to **Claim 2**, Rayskiy further discloses:

The audio input module receives speech audio at a given speaking rate and wherein the loopback rate alters the speaking rate in the audio loopback path (*user setting of a looped back audio rate, Col. 3, Lines 11-29; and Col. 1, Lines 42-51*).

With respect to **Claim 3**, Rayskiy further discloses:

The speaking rate in the audio loopback path maintains a pitch of the speech audio received in the audio input module (*variable audio signal playback with no change in pitch, Col. 2, Lines 55-59*).

With respect to **Claim 4**, Rayskiy further discloses:

User interface for selectively adjusting the selectable rate variable (*rate adjust user interfaced, Col. 3, Lines 11-29; and Fig. 1, Element 113*).

With respect to **Claim 6**, Rayskiy further discloses:

The audio loopback path presents audio at a loopback rate through a SOLA (Synchronized Overlap and Add) function (*time scaling of an audio signal using SOLA, Col. 6, Lines 5-22*).

With respect to **Claim 7**, Rayskiy further discloses:

A memory location to store a rate variable for a given user (*user rate adjust unit that would inherently require some type of storage of a user-selected playback rate in order to process audio samples, Col. 3, Lines 11-29*).

With respect to **Claim 17**, Rayskiy discloses:

Capturing speech audio in a loopback path between an audio input module and an audio output module, wherein the loopback path presents speech audio received at the audio input module to the audio output module user (first voice signal input into a microphone and processed, Col. 2, Lines 60-67; and Fig. 1 Elements 117 and 125; and second voice signal, corresponding to the input or first audio signal, fed back through a speaker, Col. 1, Lines 42-51; Col. 3, Lines 11-29; and Fig. 1, Elements 119 and 121); and

Adjusting the speech audio captured in the loopback path based up a selectable rate variable (*user setting of an audio rate based on a rate adjustment, Col. 3, Lines 11-29; and Fig. 1, Element 113*).

Rayskiy further discloses method implementation as a program stored on DSP (*Col. 6, Lines 5-40*), which would inherently require some type of storage medium for program execution.

**Claims 18-20** contain subject matter respectively similar to claims 2-4, and thus, are rejected for the same reasons.

**Claim 22** contains subject matter similar to claim 6, and thus, is rejected for the same reasons.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 5, 8-9, and 21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Rayskiy in view of Klejin (*U.S. Patent: 5,717,823*).

With respect to **Claims 5 and 21**, Rayskiy discloses the means for audio rate adjustment as applied to Claims 1 and 17. Rayskiy does not specifically suggest receiving audio and a rate variable set from a second audio handset, however Klejin recites receiving, at a first telephone,

speech and rate setting information that originates from a different telephone (*Col. 11, Line 45-Col. 12, Line 31*).

Rayskiy and Klejin are analogous art because they are from a similar field of endeavor in speech rate conversion. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Rayskiy with the speech and rate setting receiving means taught by Klejin in order to achieve device implementation in a practical consumer communication environment (*Klejin, Col. 11, Lines 45-65*).

With respect to **Claim 8**, Klejin further discloses:

The audio output module further comprises a vocoder for detecting a word rate in the audio loopback path using at least one of: an energy decision metric, a voicing decision metric, and a tonality measure (*word rate detection in a vocoder using extracted speech parameters indicative of energy and voicing decision metrics, Col. 7, Lines 33-47; and Col. 9, Lines 22-48*).

With respect to **Claim 9**, Rayskiy discloses the rate adjustment storage as applied to Claim 7, while Klejin discloses the means for word rate detection as applied to Claim 8.

8. **Claims 10-11 and 13** are rejected under 35 U.S.C. 103(a) as being unpatentable over Okuda et al (*U.S. Patent App. Publication: 2004/0179676*) in view of Rayskiy.

With respect to **Claim 10**, Okuda discloses:

A first handset (*telephone handset of a calling party, Paragraph 0034*);

A second handset (*telephone handset of a called party, 0034-0037*);

A communication infrastructure for enabling audio captured at the first handset to be presented at the second handset (*telephone line, Paragraphs 0035 and 0040*);



Wherein the audio captured at the first handset is also presented through a loopback path to an earpiece in the first handset (*reduced sidetone signal played to a calling party, Paragraph 0044*); and

Wherein the loopback path includes a loopback rate for speech audio with a selectable rate variable (*setting a desired voice speed conversion in a loopback path, Paragraphs 0041-0042*).

Although Okuda discloses that any method can be used for time scaling of an audio signal (Paragraph 0041), Okuda does not explicitly disclose the use of a Synchronized Overlap and Add (SOLA) function. Rayskiy, however, discloses a means for user-selectable speech rate adjustment using an SOLA function (*Col. 3, Lines 11-29 and Col. 6, Lines 5-22*).

Okuda and Rayskiy are analogous art because they are from a similar field of endeavor in speech rate conversion. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Okuda with the SOLA function taught by Rayskiy in order to provide a means for enabling variable playback of audio signals with no change in pitch (*Rayskiy, Col. 6, Lines 5-8*).

**Claim 11** contains subject matter similar to Claim 4, and thus, is rejected for the same reasons.

**Claim 13** contains subject matter similar to Claim 7, and thus, is rejected for the same reasons.

9. **Claims 12 and 14-16** are rejected under 35 U.S.C. 103(a) as being unpatentable over Okuda et al (*U.S. Patent App. Publication: 2004/0179676*) in view of Rayskiy and yet further in view of Klejin.

With respect to **Claim 12**, Okuda in view of Rayskiy discloses the means for audio rate adjustment as applied to Claim 11, Okuda in view of Rayskiy does not specifically suggest storing a selectable rate variable for a different handset, however Klejin recites receiving, at a first telephone, speech and rate setting information that originates from a different telephone (*Col. 11, Line 45- Col. 12, Line 31*), while Rayskiy recites the rate adjustment storage as applied to Claim 7.

Okuda, Rayskiy, and Klejin are analogous art because they are from a similar field of endeavor in speech rate conversion. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Rayskiy with the speech and rate setting receiving means taught by Klejin in order to achieve device implementation in a practical, consumer-based voice messaging environment (*Klejin, Col. 11, Lines 45-65*).

**Claim 14** contains subject matter similar to Claim 12, and thus, is rejected for the same reasons.

**Claim 15** contains subject matter similar to Claim 8, and thus, is rejected for the same reasons.

With respect to **Claim 16**, Rayskiy discloses the rate adjustment storage as applied to Claim 13, while Klejin discloses the means for word rate detection as applied to Claim 15.

*Conclusion*

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Shlomot et al (*U.S. Patent: 5,694,521*)- discloses a system for variable speed playback without pitch alteration.

Nejime et al (*U.S. Patent: 5,717,818*)- discloses a system for speech speed conversion for use in a telephone environment.

Satyamurti et al (*U.S. Patent: 5,828,995*)- discloses a method for time scaling voice messages using a WSOLA function.

Selly (*U.S. Patent: 6,718,309*)- teaches variable time scale modification using a SOLA function.

Brandel et al (*U.S. Patent App. Publication: 20020038209*)- Discloses a method for converting a speech rate of a speech signal in a mobile telephone environment.

Nejime et al ("*A Portable Digital Speech-Rate Converter for Hearing Impairment,*" 1996)- discloses a method for converting a speech speed without changing pitch.


11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James S. Wozniak whose telephone number is (571) 272-7632. The examiner can normally be reached on M-Th, 7:30-5:00, F, 7:30-4, Off Alternate Fridays.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached at (571) 272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James S. Wozniak  
1/16/2007



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